


IN THE CLAIMS:

Please add new claims 21 to 55 as follows:

--21. An apparatus for producing an aerosol from a gaseous component and a liquid component, comprising:

an atomizing container;

an atomizing nozzle arranged in said container to receive and atomize the liquid component; and

 flow forming means for receiving the gaseous component and forming a gaseous component flow around said atomizing nozzle such that the gaseous component flow mixes with the atomized liquid component, the gaseous component flow being formed by said flow forming means coaxial to said atomizing nozzle.

22. The apparatus of claim 21, wherein said flow forming means are arranged behind said atomizing nozzle in a flow direction of the atomized liquid component.

23. The apparatus of claim 21, wherein said atomizing nozzle is arranged to direct the liquid component upward and said flow forming means are arranged to direct the gaseous component upward around said atomizing nozzle.

24. The apparatus of claim 21, wherein said atomizing container has a lower region, said atomizing nozzle being arranged in a central portion of said lower region of said atomizing container.

25. The apparatus of claim 21, wherein said flow forming means are arranged in said atomizing container.

26. The apparatus of claim 21, wherein said flow forming means comprise an annular nozzle having an outlet located approximately at a level of an outlet of said atomizing nozzle.

27. The apparatus of claim 26, wherein said annular nozzle comprises a cylindrical outer ring part and an inner, conical ring part arranged in said outer ring part, a portion of said inner ring part being spaced from said outer ring part to define therebetween an expanding nozzle channel closed off at a bottom and in which the gaseous component is received.

28. The apparatus of claim 27, wherein said atomizing nozzle comprises a spherical nozzle body having a nozzle slot passing radially through said nozzle body, said nozzle slot being arranged substantially at a level of an upper edge of said inner ring part.

29. The apparatus of claim 21, wherein said atomizing nozzle comprises a spherical nozzle body having a nozzle slot passing radially through said nozzle body.

30. The apparatus of claim 21, wherein said atomizing container has a cylindrical shape.

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31. The apparatus of claim 21, further comprising a measuring container having an upper end connected to a bottom of said atomizing container for containing the liquid component, the liquid component being supplied from said measuring container to said atomizing nozzle.

32. The apparatus of claim 31, wherein said bottom of said atomizing container constitutes a part of said upper end of said measuring container.

33. The apparatus of claim 21, further comprising a supply pipeline connected to said flow forming means for supplying the gaseous component to said flow forming means, said flow forming means comprising screens enclosed in said supply pipeline and arranged one above another.

34. The apparatus of claim 33, wherein said screens are combined into a screen package.

35. The apparatus of claim 33, wherein said supply pipeline includes a connecting piece including an elbow part through which the gaseous component is passed into said atomizing container and a straight part arranged below said screens.

36. The apparatus of claim 35, further comprising:

a measuring container for containing the liquid component, the liquid component being supplied from said measuring container to said atomizing nozzle;
and

a return line connecting said connecting piece to said measuring container.

37. The apparatus of claim 33, further comprising a heating unit arranged in connection with said supply pipeline for heating the gaseous component in said supply pipeline.

38. The apparatus of claim 33, further comprising a shut-off valve arranged in connection with said supply pipeline, said shut-off valve being adapted to be actuated by an actuator.

39. The apparatus of claim 21, further comprising:

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a discharge pipeline connected to an upper end of said atomizing container through which the aerosol exits from said atomizing container; and

a heating unit arranged in connection with said discharge pipeline for heating the aerosol in said discharge pipeline.

40. The apparatus of claim 39, further comprising a shut-off valve arranged in connection with said discharge pipeline, said shut-off valve being adapted to be actuated by an actuator.

41. The apparatus of claim 21, further comprising:

a measuring container for containing the liquid component;

a connecting line leading from said measuring container to said atomizing nozzle through which liquid is directed from said measuring container to said atomizing nozzle, said atomizing nozzle being arranged at an end of said connecting line; and

a pump arranged in connection with said connecting line.

42. The apparatus of claim 21, further comprising:

a measuring container for containing the liquid component, the liquid component being supplied from said measuring container to said atomizing nozzle; and

a reservoir for storing the liquid, said measuring container being connected to said reservoir to enable replenishment of said measuring container with the liquid component.

43. The apparatus of claim 21, further comprising a measuring container for containing the liquid component, the liquid component being supplied from said measuring container to said atomizing nozzle, said measuring container having level contacts arranged one above the other for enabling a determination of use of the liquid component, limit contacts for controlling replenishment of said measuring container and a float which interacts with said level contacts and said limit contacts.

44. The apparatus of claim 43, further comprising:

a reservoir for storing the liquid;

a pipeline connecting said reservoir to said measuring container to enable replenishment of said measuring container with the liquid component; and

a valve arranged in connection with said pipeline, said valve being regulatable based on the position of said float in said measuring container.

45. The apparatus of claim 21, further comprising:

a measuring container for containing the liquid component;

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a pipeline connecting said measuring container and said atomizing nozzle, the liquid component being supplied from said measuring container to said atomizing nozzle through said pipeline; and

a flow meter arranged in connection with said pipeline.

46. The apparatus of claim 21, wherein said atomizing container has a side wall including at least one inspection opening, the apparatus further comprising a sight glass for closing each of said at least one inspection opening.

~~47.~~ A method for producing an aerosol from a gaseous component and a liquid component, comprising the steps of:

arranging an atomizing nozzle in an atomizing container;

directing the liquid component to the atomizing nozzle such that the liquid component is atomized by the atomizing nozzle; and

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forming a flow of the gaseous component around the atomizing nozzle such that the gaseous component flow mixes with the atomized liquid component, the gaseous component flow being formed coaxial to the atomizing nozzle.

48. The method of claim 47, wherein the step of forming the gaseous component flow comprises the step of forming the gaseous component flow behind the atomizing nozzle in a flow direction of the atomized liquid component.

49. The method of claim 47, further comprising the steps of:

maintaining an amount of the liquid component in a measuring container; and

supplying the liquid component from the measuring container to the atomizing nozzle.

50. The method of claim 49, further comprising the step of connecting the measuring container directly to a bottom of the atomizing container.

51. The method of claim 47, further comprising the steps of:

storing liquid component in a reservoir;

connecting the reservoir to the measuring container; and

periodically replenishing the amount of liquid component in the measuring container.

52. The method of claim 47, further comprising the steps of:

forming the gaseous component flow by means of an annular nozzle arranged around the atomizing nozzle; and

supplying the gaseous component to the annular nozzle.

53. The method of claim 47, further comprising the steps of:

forming the gaseous component flow by means of screens arranged behind the atomizing nozzle; and